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09/893,396

06/28/2001

Henry M. D'Souza

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01/15/2004

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EXAMINER

YANG, RYAN R

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 01/15/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/893,396

Applicant(s)

D'SOUZA ET AL.

Examiner

Ryan R Yang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is responsive to communications: Amendment, filed on 10/10/2003.  
This action is final.
2. Claims 1-19 are pending in this application. Claims 1, 8 and 15 are independent claims.
3. The present title of the invention is "Hardware-based accelerated color correction filtering system" as filed originally.

### ***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 15 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ijntema et al. (6,285,350).

As per claim 15, Ijntema et al., hereinafter Ijntema, discloses a hardware-implemented method of color video data correction filtering, comprising the steps of:

gamma decompensating input color video data referenced to a non-linear color space ("To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera", column 2, line 31-33);

compensating for color point data of a plurality of constituent colors of a color monitor by applying a plurality of pre-calculated gamut shifting arrays to the color point

data ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34); and

compensating the color point data after application of the plurality of pre-calculated gamut shifting arrays for non-linearities of the color monitor by applying a plurality of non-linearization tables to the color point data to produce output color video data compensated for non-linearities and color points of the color monitor ("Finally, the gamma correction has to be applied again", column 2, line 36; "The characteristics could be stored in a LUT", column 2, line 59).

6. As per claim 19, Ijntema demonstrated all the elements as applied to the rejection of independent claim 15, supra, and further discloses each of the steps of gamma decompensating, compensating using the plurality of pre-calculated gamut shifting arrays and compensating using the plurality of non-linearization tables is performed at a substantially full video rate (since the LUT table is used instead of multiplication operations, the gamut shifting arrays is performed at the full processing speed of the graphics controller).

### ***Claim Rejections - 35 USC § 103***

7. Claims 1-2, 4-5, 7-9, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) and further in view of Oku et al. (5,489,996).

As per claim 1, Ijntema et al., hereinafter Ijntema, discloses a hardware-implemented color video data correction filtering system, comprising:

a plurality of linearization tables to gamma decompensate input color video data referenced to a non-linear color space ("To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera", column 2, line 31-34; "The characteristics could be stored in a LUT", column 2, line 59);

a plurality of a set of pre-calculated gamut shifting arrays to compensate for color point data of a plurality of constituent colors of a color monitor with each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34);

and a plurality of non-linearization tables coupled to the plurality of hardware adders to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color points of the color monitor ("Finally, the gamma correction has to be applied again", column 2, line 36; "The characteristics could be stored in a LUT", column 2, line 59).

Ijntema discloses a color correction system. Ijntema further discloses a matrix for compensating color. It is noted that Ijntema does not explicitly disclose a plurality of shifting array and hardware adders coupled to one of the pre-calculated shifting arrays, however, this is known in the art as taught by Oku et al., hereinafter Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables and adders ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the

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input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72 and three adders 3, 74 and 75", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

8. As per claim 2, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra, and Ijntema further discloses the plurality of linearization tables comprises three linearization tables (since Ijntema discloses in Figure 1 amplifiers for each of red, green and blue colors,  $A_R$ ,  $A_G$  and  $A_B$ , and "The characteristics could be stored in a LUT", column 2, line 59), the set of pre-calculated gamut shifting arrays comprises three pre-calculated gamut shifting arrays ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34 ), the plurality of non-linearization tables comprises three non-linearization tables, and the plurality of constituent colors comprises three constituent colors (since Ijntema discloses the amplifiers is used for each of red, green and blue colors, it is inherent that they are the three constituent colors and since the linearization table is generated for each of the three colors, it is inherent that non-linearization table is generated for each of the three colors).

Oku further discloses "the plurality of a set of pre-calculated gamut shifting arrays comprises nine pre-calculated gamut shifting arrays" (Figure 7A and Figure 9; 'the three

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look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

9. As per claim 4, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra, and Oku further disclose the plurality of a set of pre-calculated gamut shifting arrays is stored in a plurality of look-up tables (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table in order to accelerate the processing speed.

10. As per claim 5, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema discloses a system of correcting color with a graphics controller (Figure 1 C). The controller can use look-up table for processing ("The characteristics could be stored in a LUT", column 2, line 59). It is noted that Ijntema does not explicitly disclose a graphics controller coupled to the plurality of pre-calculated gamut shifting arrays, however, this is known in the art as taught by Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30), wherein compensation for color point data through utilization of the plurality of pre-calculated gamut shifting arrays is performed at the full processing speed of the graphics controller (since the LUT table is used instead of multiplication operations, the gamut shifting arrays is performed at the full processing speed of the graphics controller).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

11. As per claim 7, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra, and Ijntema further discloses the non-linearities of the color monitor comprise an input-output characteristic for each constituent color of

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the color monitor ("The characteristics could be stored in a LUT", column 2, line 59, where the characteristics is the characteristics of the monitor).

12. As per claim 8, Ijntema discloses a computer system, comprising:

a processor (Figure 1 C);

video memory coupled to the processor (since LUT could be used in digital implementation (column 2, line 55-60), it is inherent that memory is used to store LUT); and

a color video data correction filtering system coupled to the processor, the system comprising:

a plurality of linearization tables to gamma decompensate input color video data referenced to a non-linear color space ("To fully compensate the color errors, the RGB signals have to be linearized by compensating for the gamma correction applied in the camera", column 2, line 31-34; "The characteristics could be stored in a LUT", column 2, line 59);

a plurality of a set of pre-calculated gamut shifting arrays to compensate for color point data of a plurality of constituent colors of a color monitor with each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables ("a transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34);

a plurality of non-linearization tables coupled to the plurality of hardware adders to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color point of the color monitor ("Finally, the

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gamma correction has to be applied again", column 2, line 36; "The characteristics could be stored in a LUT", column 2, line 59).

Ijntema discloses a color correction system. Ijntema further discloses a matrix for compensating color. It is noted that Ijntema does not explicitly disclose a plurality of shifting array and hardware adders coupled to one of the pre-calculated shifting arrays, however, this is known in the art as taught by Oku et al., hereinafter Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables and adders ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72 and three adders 3, 74 and 75", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

13. As per claim 9, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra, and Ijntema further discloses the plurality of linearization tables comprises three linearization tables (since Ijntema discloses in Figure 1 amplifiers for each of red, green and blue colors,  $A_R$ ,  $A_G$  and  $A_B$ , and "The characteristics could be stored in a LUT", column 2, line 59), the set of pre-calculated gamut shifting arrays comprises three pre-calculated gamut shifting arrays ("a

transformation of the RGB signals with a 3x3 matrix can be done", column 2, line 34 ), the plurality of non-linearization tables comprises three non-linearization tables, and the plurality of constituent colors comprises three constituent colors (since lntema discloses the amplifiers is used for each of red, green and blue colors, it is inherent that they are the three constituent colors and since the linearization table is generated for each of the three colors, it is inherent that non-linearization table is generated for each of the three colors).

Oku further discloses "the plurality of a set of pre-calculated gamut shifting arrays comprises nine pre-calculated gamut shifting arrays" (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into lntema because lntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

14. As per claim 12, lntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra, and Oku further disclose the plurality of a set of pre-calculated gamut shifting arrays is stored in a plurality of look-up tables (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing

unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table in order to accelerate the processing speed.

15. As per claim 13, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra, and Ijntema further discloses the non-linearities of the color monitor comprise an input-output characteristic for each constituent color of the color monitor ("The characteristics could be stored in a LUT", column 2, line 59, where the characteristics is the characteristics of the monitor).

16. As per claim 14, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra.

Ijntema disclose a system of correcting color with a graphics controller (Figure 1 C). The controller can use look-up table for processing ("The characteristics could be stored in a LUT", column 2, line 59). It is noted that Ijntema does not explicitly disclose a graphics controller coupled to the plurality of pre-calculated gamut shifting arrays, however, this is known in the art as taught by Oku. Oku discloses a color correcting system in which the color adjusting matrix is built with a plurality of look-up tables ("The hardware of the first color correction unit may be constructed as shown in FIG. 9. As shown, the three look-up tables 61, 62 and 63 of the input normalizing unit and the

linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30), wherein compensation for color point data through utilization of the plurality of pre-calculated gamut shifting arrays is performed at the full processing speed of the graphics controller (since the LUT table is used instead of multiplication operations, the gamut shifting arrays is performed at the full processing speed of the graphics controller).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a system for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table and adders in order to accelerate the processing speed.

17. Claims 3 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) and Oku et al. (5,489,996) as applied to claims 1 and 8 above, respectively, and further in view of Wilt et al. (US 2002/0085015).

18. As per claim 3, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema and Oku disclose a system of color correction for a CRT. It is noted that Ijntema and Oku do not explicitly disclose the CRT (which is a non-linear display device) has sRGB color space, however, this is known in the art as taught by Wilt et al., hereinafter Wilt. Wilt discloses a color conversion method using non-linear sRGB color space ([0005]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Wilt into Ijntema and Oku because Ijntema and Oku disclose a system of correcting color relating to a CRT (which has non-linear color space) and Wilt discloses a color correcting system using non-linear sRGB space in order to extend the correction method to displays, scanners and digital cameras ([0005]).

19. As per claim 11, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, *supra*.

Ijntema and Oku disclose a system of color correction for a CRT. It is noted that Ijntema and Oku do not explicitly disclose the CRT (which is a non-linear display device) has sRGB color space, however, this is known in the art as taught by Wilt et al., hereinafter Wilt. Wilt discloses a color conversion method using non-linear sRGB color space ([0005]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Wilt into Ijntema and Oku because Ijntema and Oku disclose a system of correcting color relating to a CRT (which has non-linear color space) and Wilt discloses a color correcting system using non-linear sRGB space in order to extend the correction method to displays, scanners and digital cameras ([0005]).

20. Claims 6 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) and Oku et al. (5,489,996) as applied to claims 1 and 8 above, respectively, and further in view of Shelton (US 2002/0161803).

As per claim 6, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema discloses a system of color correction which could be applied to TV sets and computer monitors (column 3, line 18-19). It is noted that Ijntema does not explicitly disclose the input color video data is input from a website, however, this is known in the art as taught by Shelton. Shelton discloses a color correction method in which color data can be transmitted from a website (Figure 2 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shelton into Ijntema and Oku because Ijntema and Oku disclose a system of color correction a pluralities of monitor and Shelton discloses the color data could be transmitted from a website in order to correct a plurality of remotely located monitor.

21. As per claim 10, Ijntema and Oku demonstrated all the elements as applied to the rejection of independent claim 8, supra.

Ijntema and Oku disclose a system of color correction which could be applied to TV sets and computer monitors (Ijntema column 3, line 18-19, where the monitor represents a non-linear color space). It is noted that Ijntema does not explicitly disclose the input color video data is input from a website, however, this is known in the art as taught by Shelton. Shelton discloses a color correction method in which color data can be transmitted from a website (Figure 2 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shelton into Ijntema and Oku

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because Ijntema and Oku disclose a system of color correction a pluralities of monitor and Shelton discloses the color data could be transmitted from a website in order to correct a plurality of remotely located monitor.

22. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) as applied to claim 15 above, and further in view of Shelton (US 2002/0161803).

As per claim 16, Ijntema demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Ijntema discloses a method of color correction which could be applied to TV sets and computer monitors (column 3, line 18-19). It is noted that Ijntema does not explicitly disclose the input color video data is input from a website, however, this is known in the art as taught by Shelton. Shelton discloses a color correction method in which color data can be transmitted from a website (Figure 2 18).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shelton into Ijntema because Ijntema discloses a method of color correction a pluralities of monitor and Shelton discloses the color data could be transmitted from a website in order to correct a plurality of remotely located monitor.

23. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) as applied to claim 15 above, and further in view of Wilt et al. (US 2002/0085015).

As per claim 17, Ijntema demonstrated all the elements as applied to the rejection of independent claim 15, supra.

Ijntema discloses a method of color correction for a CRT. It is noted that Ijntema does not explicitly disclose the CRT (which is a non-linear display device) has sRGB color space, however, this is known in the art as taught by Wilt et al., hereinafter Wilt. Wilt discloses a color conversion method using non-linear sRGB color space ([0005]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Wilt into Ijntema because Ijntema disclose a method of correcting color relating to a CRT (which has non-linear color space) and Wilt discloses a color correcting method using non-linear sRGB space in order to extend the correction method to displays, scanners and digital cameras ([0005]).

24. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ijntema et al. (6,285,350) as applied to claim 15 above, and further in view of Oku et al. (5,489,996).

As per claim 18, Ijntema demonstrated all the elements as applied to the rejection of independent claim 15, supra.

Ijntema discloses a method of correcting color. It is noted that Ijntema does not explicitly disclose the plurality of pre-calculated gamut shifting arrays is stored in a plurality of look-up tables, however, this is known in the art as taught by Oku. Oku disclose a method of correcting color by using a plurality of table instead of matrix (Figure 7A and Figure 9; 'the three look-up tables 61, 62 and 63 of the input normalizing

unit and the linear matrix calculator 57 are constructed with a total of nine look-up tables 64 60 72", column 9, line 25-30).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Oku into Ijntema because Ijntema discloses a method for color correction with matrix for color compensation and Oku discloses the matrix used for color compensation can be constructed with a plurality of look-up table in order to accelerate the processing speed.

### ***Response to Arguments***

25. Applicant's arguments filed 10/10/2003 have been fully considered but they are not persuasive.

As per claim 15 and 19, applicant alleges Ijntema does not disclose the use of a plurality of pre-calculated gamut shifting arrays or the application of a plurality of non-linearization tables. In reply, examiner considers a 3x3 matrix is the gamut shifting array used to compensate for color point data and the LUT storing the characteristics (column 2, line 59) the non-linearization table.

As per claims 1-14 and 16-18, applicant alleges since Ijntema does not satisfy limitations as discussed above, therefore, 35 USC 103 rejection is defective. In reply, examiner considers Ijntema satisfies claimed limitations.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that

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any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

### ***Conclusion***

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Inquiries

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27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-6133**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-4700377.

Ryan Yang  
July 17, 2003



**MICHAEL RAZAVI**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**